

CLAIMS

What is claimed is:

- 5 1. A backlight module, comprising:
 a stack assembly including a supporting frame, a reflecting plate
 and a light guiding plate, said supporting frame being provided with at
 least one engaging element and a recess at each end thereof;
 at least one optical film placed on said stack assembly;
10 at least one lamp assembly accommodated at one side portion of
 said light guiding plate; and
 at least one side fixing frame disposed at the side of said stack
 assembly where said lamp assembly is accommodated, said side fixing
 frame being provided with a groove, at least one counterpart of said
15 engaging element and a protrusion at each end thereof, said groove
 being served for containing said lamp assembly and fastening said
 stack assembly, said counterpart of said engaging element being
 engaged with said engaging element of said supporting frame, and said
 protrusion being engaged with said recess of said supporting frame;
20 wherein said side fixing frame fastens said stack assembly and in
 combination with said optical film constitutes said backlight assembly.
- 25 2. The backlight module of claim 1, wherein said groove of said
 side fixing frame is a U-shaped groove.
3. The backlight module of claim 1, wherein said groove of said
 fixing frame is a C-shaped groove.

4. The backlight module of claim 1, wherein said engaging element is a hook-type coupling element or a trench-type coupling element.

5 5. The backlight module of claim 1, wherein said engaging element is a protrusion or a recess structure.

6. A method for assembling a backlight module, comprising:
placing a reflecting plate on a supporting frame, said supporting
10 frame being provided with at least one engaging element and a recess at each end thereof;
placing a light guiding plate on said reflecting plate;
disposing at least one lamp assembly at one side of said light guiding plate to form a stack assembly;
15 inserting at least a side fixing frame at the side of said stack assembly where said lamp assembly is accommodated, said side fixing frame being provided with a groove, at least one counterpart of said engaging element and a protrusion at each end thereof, said groove being served for containing said lamp assembly and fastening said
20 stack assembly, said counterpart of said engaging element being engaged with said engaging element of said supporting frame, and said protrusion being engaged with said recess of said supporting frame;
; and
placing at least one optical film on said light guiding plate to
25 complete the assembling of said backlight assembly.

7. The method of claim 6, wherein said groove of said side fixing frame has a U-shape configuration.

8. The method of claim 6, wherein said groove of said side fixing frame has a C-shaped configuration.

5 9. The method of claim 6, wherein said engaging element is a hook-type coupling element or a trench-type coupling element.

10 10. The method of claim 6, wherein said engaging element is a protrusion or a recess structure.

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11. A method for assembling a backlight module, comprising:
placing a reflecting plate on a supporting frame, said supporting frame being provided with at least one engaging element and a recess at each end thereof;

15 placing a light guiding plate on said reflecting plate to form a stack assembly;

placing a lamp assembly in a groove of a side fixing frame, said side fixing frame including at least one counterpart of said engaging element and a protrusion at each end thereof;

20 inserting said side fixing frame in said stack assembly, said counterpart of said engaging element engaged with said engaging element of said supporting frame and said protrusions of said side fixing frame engaged with said recess of said supporting frame ; and

25 placing at least one optical film on said light guiding plate to complete assembling of said backlight assembly.

12. The method of claim 11, wherein said groove of said side

fixing frame has a U-shape configuration.

13. The method of claim 11, wherein said groove of said side fixing frame has a C-shaped configuration.

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14. The method of claim 11, wherein said engaging element is a hook-type coupling element or a trench-type coupling element .

15. The method of claim 11, wherein said engaging element is a protrusion or a recess structure.

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